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Appl. No.: 10/674,956

Amdt. Dated February 21, 2007

Response to Office Action Mailed November 21, 2006

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**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions and listings of claims in this application.

1. (Currently Amended) An optical wave guide element ~~having a substrate which has electro-optic effect and an optical wave guide formed on the substrate~~, comprising:

a substrate which has electro-optic effect;

an optical wave guide formed on the substrate;

a reflective means formed on a side of the substrate where an incoming end of the optical wave guide is positioned; and

a transmission surface formed non-parallel to an input direction of the optical wave guide and apart from the optical wave guide; and

an input optical fiber connected ~~directly to the substrate and positioned apart from the optical wave guide~~ transmission surface,

wherein the reflective means ~~is positioned and the transmission surface are formed on the substrate~~ so that a light wave exiting from the input optical fiber propagates within the substrate excluding the optical wave guide from the transmission surface toward the reflective means, and is reflected from the reflective means to enter the optical wave guide,

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~~and the input optical fiber and the optical wave guide are positioned so that an angle~~  
formed between an output direction of the input optical fiber and ~~an~~ the input direction of the  
optical wave guide is set at approximately 90°, and

the propagation distance of light waves that propagate inside the substrate excluding the  
optical wave guide, is 200  $\mu$ m or less.

2. (Currently Amended) An optical wave guide element ~~having a substrate which~~  
~~has electro-optic effect and an optical wave guide formed on the substrate~~ comprising:

a substrate which has electro-optic effect;

an optical wave guide formed on the substrate;

a reflective means formed on a side of the substrate where an outgoing end of the optical  
wave guide is positioned; and

a transmission surface formed non-parallel to an output direction of the optical wave  
guide and apart from the optical wave guide; and

an output optical fiber connected directly to the substrate and positioned apart from the  
optical wave guide transmission surface,

wherein the reflective means is positioned and the transmission surface are formed on the  
substrate so that a light wave exiting from the optical wave guide is directed toward the reflective  
means, from which the light wave is reflected, and propagates within the substrate excluding the  
optical wave guide to enter the output optical fiber through the transmission surface,

~~and the output optical fiber and the optical wave guide are positioned so that an angle~~  
formed between ~~an~~ the output direction of the optical wave guide and an input direction of the  
output optical fiber is set at approximately 90°, and

the propagation distance of light waves that propagate inside the substrate excluding the  
optical wave guide, is 200  $\mu$ m or less.

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3. (Cancelled).
4. (Previously Presented) The optical wave guide element according to Claim 1, wherein an angle formed between a normal direction of the reflective means and an optical axis of the optical wave guide that makes contact with the reflective means is no smaller than an angle of total reflection of light waves that are transmitted through the optical wave guide.
5. (Previously Presented) The optical wave guide element according to Claim 1, wherein the reflective means comprises a reflective film.
6. (Currently Amended) The optical wave guide element according to Claim 1, wherein the ~~input optical fiber is connected to~~ the transmission surface is formed on a side of the substrate where the reflective means is not formed, or ~~to~~ on a bottom surface of the substrate.
7. (Currently Amended) The optical wave guide element according to Claim 2, wherein the ~~output optical fiber is connected to~~ the transmission surface is formed on a side of the substrate where the reflective means is not formed, or ~~to~~ on a bottom surface of the substrate.
8. (Cancelled).
9. (Previously Presented) The optical wave guide element according to Claim 2, wherein an angle formed between a normal direction of the reflective means and an optical axis of the optical wave guide that makes contact with the reflective means is no smaller than an angle of total reflection of light waves that are transmitted through the optical wave guide.
10. (Previously Presented) The optical wave guide element according to Claim 6, wherein an angle formed between a normal direction of the reflective means and an optical axis of the optical wave guide that makes contact with the reflective means is no smaller than an angle of total reflection of light waves that are transmitted through the optical wave guide.
11. (Previously Presented) The optical wave guide element according to Claim 2, wherein the reflective means comprises a reflective film.

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12. (Previously Presented) The optical wave guide element according to Claim 6, wherein the reflective means comprises a reflective film.

13. (Previously Presented) The optical wave guide element according to Claim 7, wherein the reflective means comprises a reflective film.

14. (Previously Presented) The optical wave guide element according to Claim 2, wherein the reflective means separates light waves transmitted from the optical wave guide side into transmitted light and reflected light so that the transmitted light is made to enter a light receiving element provided outside the substrate.

15. (Previously Presented) The optical wave guide element according to Claim 7, wherein the reflective means separates light waves transmitted from the optical wave guide side into transmitted light and reflected light so that the transmitted light is made to enter a light receiving element provided outside the substrate.

16-22. (Cancelled).

23. (Previously Presented) The optical wave guide element according to Claim 7, wherein an angle formed between a normal direction of the reflective means and an optical axis of the optical wave guide that makes contact with the reflective means is no smaller than an angle of total reflection of light waves that are transmitted through the optical wave guide.

24-25. (Cancelled).